



Rossi Honda, Vineland. NJ

Alternative Energy: Location, Location, Location

With so much focus on climate change / global warming there is a lot of emphasis on lowering our carbon footprint: reducing our consumption/reliance on fossil fuels for a better future. That means using alternative sources of energy: primarily solar, and wind.

In fact Governor Murphy signed an executive order a year ago, in May of 2018, directing an updated Energy Master Plan for the state to achieve 100% clean energy by 2050! The energy bill established one of the most ambitious renewable energy standards in the country. The goals are that 21% will come from renewables by 2020, 35% by 2025 and 50% by 2030. This means lots of investments and jobs and a cleaner future.

In my opinion it also means some major consideration of protection priorities. As an environmental organization we have at

times objected to solar and wind projects. You may be asking, “Huh?” However, it is important that we don’t solve one problem by creating another. Energy always has some trade-offs but we can make wise decisions. If I offer some examples it should become clearer.

A number of years ago there was a proposal to put a massive wind farm on the Delaware Bay. Ultimately, the DEP adopted a policy that this was not an appropriate place for massive monopole windmills. The concern was that the Delaware is a major flyway for migrating avian species, has the greatest concentration of NJ nesting bald eagles, and is home to the economically and historically important oyster beds. Actually the migration of species across the bay is nearly year-round. Currently the shorebirds are amassing there, in late summer purple martins stage, and in the fall ducks, railbirds, raptors, and even butterflies will all gather for annual migrations. The windmills would have dramatic effects on species, some of which are already imperiled. Ridges are appealing for windmill developers because of updrafts. However the same updrafts often attract birds who also follow the ridges for navigation. So these areas have to be analyzed for avian use as well.

Bats, too, are adversely affected by windmills because the air pressure

collapses their lungs. So you wouldn't want to place a bank of windmills near an important bat cave. In fact a lot of habitat is disturbed by windmills in large wind farms. And they require the creation of edge roads that disrupt breeding birds, making them more vulnerable to predation.

On the other hand feral cats, power lines, windows, pesticides, automobiles, and lighted communication towers all kill more birds than windmills. However, adding any more dangers to the equation is not a good idea for the survival of a species.

In the West it was discovered that the design of windmills was important in protecting birds. For instance, latticework windmills attracted the perching of golden eagles where monopoles did not. So both placement and design play a factor in lessening impacts, and we should avoid mortalities by making wiser decisions. The Nature Conservancy supports wind development, but with caveats that regulations be followed, along with "the best practices offered by conservation organizations and the best science available."

Solar, one of my favorite alternatives, can be counter-productive if not wisely placed. At CU Maurice River we have been proponents of solar in tandem with co-use and on impervious surfaces. In one

instance in Vineland, between Mays Landing and Hance Bridge Roads, we objected to a proposed solar field that would have leveled a forest that was critical habitat for New Jersey endangered species. It is counterproductive to cut down a forest and replace it with solar in order to lessen a carbon footprint! Forests, oceans, and soils remove and store carbon and provide sequestration: in other words, clean air. And forests also offer habitat, heat sinks/cooler climate, recreational locations, water replenishment and filtering, and prevent erosion. Properly managed, they also provide forestry products. And here is one for all of you fellow tree-huggers: spirituality. Yup, it is now scientifically proven that a walk in the woods has positive effects on mental and physical health: actual positive chemical effects in our brains!

Where should solar be placed? Well, for one thing, solar loses its effectiveness over distance. So solar should be placed close to where there is demand, and better yet, in conjunction with its use, such as a rooftop, or next to a facility like a hospital or a factory. At CU we advocate for solar on impervious cover or already-developed space. Stockton State College and Rossi Honda, for example, erect it on their parking lots. At Rossi they can park the cars beneath the solar panels, at the same time protecting their inventory and

generating their own power. Over the next 25 years Rossi anticipates reducing CO2 emissions by 10 million pounds and their electric bill by \$2 million. Way cool.

And don't forget conservation. Recently I visited Garden State Highway Products. Their lights come on when you enter rooms and go off when the room is unoccupied. They have skylights in the manufacturing area and often extra lighting is unnecessary. At our CU Maurice River office we installed LED lighting. In one warehouse I visited, lights go on in aisles when people are present and off when they are not. I could give countless examples of businesses saving fossil fuels and dollars. A good place to find out more about these construction innovations is the US Green Building Council and their LEED certifications.

Identifying proper places for renewable energy while guarding natural resources is worth the challenge. I for one wish the Murphy administration well in their quest to implement an Energy Master Plan that we can be proud to leave to future generations.

